# ORNITHOLOGICAL LITERATURE

A Laboratory and Field Manual of Ornithology. By Olin Sewall Pettingill, Jr. Burgess Publishing Company, Minneapolis, revised ed., 1946: 8½ × 11 in., vi + 248 pp., illustrated by Walter J. Breckenridge. Ring or staple binding. $3.50.

This manual represents a work of great value to teachers and students of ornithology. The wealth of critically selected material which it contains is useful not only in teaching but also in research. The text is clearly written and well organized, but more important than even these desirable features is the degree to which this manual views birds from the standpoint of general biological problems.

The text is divided into 18 sections; each gives an outline of basic information, instructions for study, and (with three exceptions) a bibliography. The first 10 sections are designed for a spring or summer introductory course and deal with the following: topography of the bird, feathers and feather tracts, internal anatomy, classification and nomenclature, external structural characters, laboratory identification, plumages and plumage coloration, distribution and migration, field identification, and bird ecology. The remaining 8 sections are intended for an advanced summer course and deal with communities, territory, mating, nests and nest-building, eggs and incubation, young and their development, parental care, and bird populations.

The descriptive sections on anatomy leave little to be desired. For an introductory course, they are comprehensive, yet compact. Instructions are set forth with special effort to save a student's time by enabling him to focus attention on critical detail. Certain parts of the section on internal anatomy might be considered irrelevant, but the section is "not included in required laboratory work."

Perhaps the weakest part of the entire manual is that dealing with classification and nomenclature. The definition of "characters" (p. 53) might be clearer if it read "*distinctive or peculiar* points of structure or of habit." It should be made absolutely clear to the student that classification rests on characters that are *diagnostic* (a word not used in the section). The unmodified statement that subspecies "differ minutely" would seem to promote beginners' and non-systematists' misunderstanding of the bases and significance of subspecific distinctions. A thinking student will wonder why so many ornithologists concern themselves with subspecies. Just a sentence or two, with references to pertinent discussions in Mayr's book and other sources, would help. A hint that classification schemes are not static might be provided by the statement that there is a tendency, at present, toward elimination of subgenera in such "standard works" as the A.O.U. Check-List and that the category "superspecies" has never been used in that work. Pettingill suggests (p. 56) that the student "habitually rely upon it [the A.O.U. Check-List] for the proper presentation of all technical and vernacular . . . names." But for vernaculars in general, Peterson's Field Guides are a better source. The bibliography of this section does not list the works of Ridgway, Ridgway and Friedmann, or Hellmayr, all of which seem worthy of inclusion.

The sections on ecological factors, communities, and populations deal in concise and apt fashion with topics not easy to present. Here two points are worth some comment. First, in the procedure suggested for the study of bird communities (p. 142), separate mention is made of "effect of edge" and "effect of ecotones." But an edge may be considered an ecotone, usually a sharp one. Ecotones or transitions may be sharp or gradual, local or regional. "Edge" is a term of more restricted meaning, but the principle is the same, namely, community interdigitation, intermixture, or juncture. The second point is the fact that in the section on populations, equal emphasis is given to measurements of absolute abundance and

those of relative abundance. The author, as a teacher, has excellent opportunity to encourage counts of actual populations and to point out the limitations of measurements of relative abundance. I have the impression that the latter often serve as an excuse for merely pleasurable "birding." The inclusion of road censuses (p. 202) as a method of measuring relative abundance may lead some students to take this "game" seriously.

Additional useful information is organized in seven appendices, as follows: Ornithological Field Methods; Preparation of a Paper; Bibliographies Pertaining More or Less to Ornithology; Bibliography of Life History Studies (including unpublished theses); Selected Bibliography of State Works on Birds; Books for General Information and Recreational Reading; Current North American Ornithological Journals. The bibliography of State works is of deliberately restricted scope, but the following additions seem worthwhile and significant supplements to the listed works: Brewster on the Lake Umbagog region of Maine (1937. *Bull. Mus. Comp. Zool.,* 66:1–620), Griscom and Crosby on southern Texas (1925–26. *Auk,* 42:432–440, 519–537; 43:18–36), Linsdale on the Great Basin (1938, *Amer. Midl. Nat.,* 19:1–206), and van Rossem on the Charleston Mountains of Nevada (1936. *Pacific Coast Avifauna No.* 24:1–65). B. T. Gault's "Check List of the Birds of Illinois" (Ill. Aud. Soc., 1922) is a list published earlier than Schantz' "Birds of Illinois" (1928) cited by Pettingill, but is, nevertheless, the more informative of the two. These, however, are minor points. Perhaps the only real criticism to be made of this bibliography is that it ignores Canada: Taverner's works, for instance, are nowhere cited.

The entire manual leads one to reflect on the pedagogic method of approach. Perhaps there is a danger that simplification in a manual of this type may become excessive; that in trying to cover a large amount of information the student may spend too much time filling in blanks and adding detail to base drawings without knowing why. But the extent to which this is a real danger depends not on the manual but on the teacher and on his demands in terms of the available time. Some will perhaps wonder if the rather detailed outlines Pettingill provides for the study of breeding biology would not stifle student originality. Here, however, I believe the approach of this manual is in the long run the most successful.

The manual is distinctly more than an entry book of details on the characters of bird groups, their world distribution, and the identification of local avifaunae. Although designed for teaching-needs, the manual can also serve—if only for its excellent bibliographies—as a handbook to investigators and as a check-list of the desired types of information on breeding biology.—Frank A. Pitelka.

## BIBLIOGRAPHY *

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ANATOMY (*including plumage and molt*)

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